

U.S. Patent Application Serial No. 10/734,242
Amendment filed December 22, 2005
Reply to OA dated October 18, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1(Currently Amended): A method for manufacturing a bare-fiber-metal-coated optical fiber having a bare fiber and a resin cover with which the peripheral surface of the bare fiber is covered except for part of the fiber-end side of the bare fiber; the bare fiber being exposed by removing the resin cover at the part of the fiber-end side thereof and being provided with a metallic coating on its peripheral surface excluding an end face portion of the bare fiber; the method comprising:

a subbing-layer formation step of forming, on the peripheral surface of the bare fiber having been exposed by removing the resin cover and on which the metallic coating has not been provided, a metallic subbing layer consisting of an electroless plating layer with a thickness necessary for electrolytic plating and an electrolytic plating layer, followed by;

an end face treatment step of subjecting the bare fiber on which the subbing layer has been formed, to end face treatment by means of an optical-fiber cleaver to expose an end face portion of the bare fiber; and followed by

a surface layer formation step of subjecting the bare fiber on which the end face treatment has been carried out, to electrolytic plating to form the metallic coating as a surface layer.

Claim 2(Original): The bare-fiber-metal-coated optical fiber manufacturing method according to claim 1, wherein said subbing layer consists essentially of an electroless nickel plating layer of from 0.01 μm to 1.5 μm in thickness and an electrolytic gold plating layer of from 0.03 μm to 0.1 μm in thickness which has been formed on the electroless nickel plating layer.

Claim 3(Original): The bare-fiber-metal-coated optical fiber manufacturing method according to claim 1 or 2, wherein said surface layer consists essentially of an electrolytic nickel plating layer and an electrolytic gold plating layer having been formed on the electrolytic nickel plating layer.

Claim 4(Original): The bare-fiber-metal-coated optical fiber manufacturing method according to claim 3, wherein said electrolytic nickel plating layer is set in a thickness of from 0.5 μm to 4.0 μm , and said electrolytic gold plating layer in a thickness of from 0.05 μm to 1.0 μm .

Claim 5(Original): The bare-fiber-metal-coated optical fiber manufacturing method according to claim 3, wherein said electrolytic nickel plating layer and said electrolytic gold plating layer are constituted of nickel and gold, respectively, each having a purity of 99.9% or more.